



# Provincial Scope Document

## *AUTOMOTIVE SERVICE (Post-secondary) 2009*

Contest Length: 8 hours

Check in time: 7:45

Contest Start: 8:00

### **Contest Sponsor: Snap-On Tools**

#### **Purpose of the Challenge:**

Assess the contestant's skills in correctly inspecting, repairing and adjusting detached and/or mounted auto parts, as compared to industry standards

#### **Skills & Knowledge to be Tested:**

##### **Safety:**

- Proper eye protection and clothing **MUST** be worn at all times during the competition
- CSA approved/goggles
- Coveralls/shop coats
- All competitors must follow safety standards as per competition area

##### **Service Information Retrieval:**

- Electronic system use
- Traditional manual use

##### **Customer Relations:**

- Satisfy customer inquiries
- Interpret customer information to convey diagnostic approach
- Explanation of service work performed

##### **Theory:**

- Examination of questions regarding all aspects of the repair and diagnosis of automobiles

##### **Fabrication:**

- Select and operate appropriate fabricating hand tools

**Manual Transmissions/Manual Transaxles:**

- Identify components
- Analyze gear ratios
- Power flow
- Clutch operation
- Assembly/disassembly procedures
- Routine maintenance/adjustments
- Component fault diagnosis

**Automatic Transmissions/Automatic Transaxles**

- Identify components
- Routine maintenance/adjustments
- Assembly/disassembly procedures
- Electrical/hydraulic diagnosis
- Power flow
- Component fault diagnosis

**Differentials/ Drive shafts /Drive axles**

- Identify components
- Assembly/disassembly
- Inspecting and testing
- Inspection and adjustment of operating angles
- Power flow
- Adjustments

**Engine Mechanical**

- Assembly/disassembly
- Identify components
- Component fault diagnosis
- Inspection and testing
- Diagnosis and service of cylinder heads and blocks
- Measurements

**Turbochargers/Superchargers**

- Identify components
- Inspection and testing

**Heating/Cooling Systems (excluding A/C)**

- Identify components
- Inspection and testing
- Assembly/disassembly

### **Fuel Systems**

- Identify components
- Inspection and testing

### **Engine Management**

- Identify components
- Driveability diagnostics
- Test equipment usage
  - Scan Tool
  - Multi-meter
  - Lab-scope
  - Exhaust gas analyzer
  - Component operation and testing

### **Ignition Systems**

- Identify components
- Inspection and testing
- Diagnostics
- Adjustments

### **Vehicle Emissions**

- Exhaust gas analysis
- Identify components
- System inspection and testing

### **Electrical Accessories**

- Testing and diagnosis of electrical accessories

### **Electrical**

- Starting systems
- Charging systems
- Batteries
- Testing and diagnosis

### **Braking Systems (excluding air brake systems)**

- Identify components
- Inspection and testing
- Assembly/disassembly
- Basic systems
- ABS
- Routine maintenance/adjustments
- Diagnostics

### **Suspension and Steering**

- Identify components
- Inspection and testing
- Assembly/disassembly
- Routine maintenance/adjustments
- Diagnostics

### **Component Identification**

- Purpose, operation and testing of identified components

## **Judges**

Judging will be done by qualified industry representatives, wherever possible.

## **Tools / Equipment / Supplies / Clothing**

- Make of vehicles to be used in the competition will be disclosed two weeks prior to the competition start date
- All tools and equipment will be supplied and are generic in nature

### **To be supplied by contestants:**

- CSA approved safety footwear must be worn at all times
- CSA approved safety glasses or goggles
- Coveralls / shop coats
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## **Point Breakdown / 1000 Total:**

- Follows procedures as per industry standards
- Achieves target results
- Time
- Compliance with safety regulations
- Vehicle and equipment care
- Vehicle integrity
- Parts integrity
- Performs each task using industry-accepted practices
- Shows a positive attitude to the judges and other contestants
- Emphasis in marking should be toward overall performance as opposed to completion of station
- Each practical station shall have equal value and total 90% of the competition
- Written exam shall be worth 10% of the competition total

## Safety Requirements:

Safety awareness/requirements will be maintained at minimum industry standards (Workers Compensation Board or equivalent) at all times. Contestants will not be allowed to participate without proper safety equipment.

## Technical Committee:

Robert Kunka      Technical Chair      rkunka@vcc.ca  
Jim Davies, Alex Romashenko, Greg Henderson, Fred Grimann,  
Jason Devisser, Keith Lillyman, John Lambert, Gary Mui  
Brett Griffiths, Stan Wong, Baljit Kang

Gold medal winners at the BC Skills Competition are eligible to compete at the Canadian Skills Competition May 20-23, 2009, Charlottetown, PEI.

**Skills Canada BC reserves the right to make changes to the scope document. Please check the website for updates.**